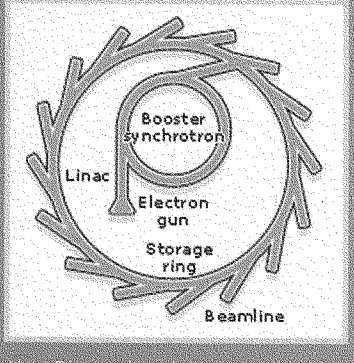
Markets & Business

The £500m ($791.3m) Diamond synchrotron being built in Oxfordshire at the Rutherford Appleton Laboratory (RAL) is the biggest new science facility to be built in Britain. It has an estimated 20-year life. In the US, Cornell University will get up to $124m over five years from the National Science Foundation to support research at the Laboratory for Elementary-Particle Physics (LEPP) and the Cornell High Energy Synchrotron Source (CHESS). Some $99m already approved, will go to LEPP. Up to $25m recommended would go to CHESS, with $2.44m of this funded by the National Institutes of Health's National Institute for General Medical Sciences.



How Diamond works

Electrons fired into straight accelerator or linac are boosted in the small synchrotron and injected into storage ring. Magnets bend and focus electrons. Energy lost emerges down beamlines as highly focused light at X-ray wavelengths.

Sun Microsystems is to invest £36m in its UK plant at Linlithgow, Scotland to boost factory manufacturing capability and set up a customer monitoring service.

Agilent Technologies has opened two new facilities in Penang, Malaysia that will include an R&D centre, design and metrology labs, and manufacturing lines of Agilent's latest test and measurement instruments and semiconductor products.

Defence opportunity for EU companies

The EU Commission has proposed a defence equipment policy to back up the developing European Security and Defence Policy (ESDP) which has been accepted. It underlines that defence spending cost efficiency; the maintenance of a competitive defence and technological industrial base; better access for EU manufactured goods to third country markets; ethics and fairness in the arms trade and security of supply are all important when defining an EU defence equipment policy. It also makes clear that it is aware of the need to respect Member States' prerogatives in this area.

Enterprise Commissioner Erkki Liikanen believed taxpayers were not getting the best from investment in security, and a European defence equipment market would bring economic efficiencies. "It is crucial for both civil and defence sectors of the economy that we create an environment in which European companies can give better value for money," he said. Part of the workload will include evaluating the EU's military readiness with regard to force deployment capability and their interoperability.

In terms of financial support, the agency would also have its own budget, initially restricted to R&D relating to new technologies where the spin-offs for civilian industry are known.

China fabless survey

A new survey of Chinese IC design companies by market researchers El-Segundo based iSuppli Corp, concludes that after years of reliance on "reverse engineering" methodology, Chinese fabless companies have broken through in areas like smart card ICs, communications ASICs and even 32- and 64-bit CPUs. Hurdles to be overcome during the next phase of development include quality comparable to its foreign rivals and lowering costs through the use of local and international fabs. Unlike U.S. 'pure' fabless operations, China's IC design industry operates as a 'hybrid' business combining OEM-owned design centres and companies with design centres operated by government institutes and universities.

A complete Chinese silicon supply chain will emerge in the next five years as fabless companies mature. Design levels are likely to remain at 1.0 to 0.35-micron for several more years with an advance to 0.25 to 0.18 micron technology for CMOS products in the next two years.

Local design companies can turn out more than 300 product designs a year, with the design cycles ranging from three to 18 months.

The report notes that China's membership in the World Trade Organization means there is no immediate need for integrated device manufacturers to move operations to China in order to reduce costs. However, the authors warn that overseas companies must continue to keep close watch on IP, since some local fabless firms continue to reverse engineer products.

Nanometrics increases R&D spending

Nanometrics revenues for the 4Q, 2002 were $9.7m, up 14% compared to the 3Q of 2002 and 18% compared to the 4Q of 2001. The increase has largely resulted from demand for semiconductor process control metrology equipment in the Pacific Rim countries. Net loss in 4Q was $3.2m or $0.27 per diluted share, compared to $1.8m or $0.15 per for the period 2001. Loss included a one-time goodwill impairment charge of $1m determined from the annual impairment test. There was no charge in 2001. Year end 2002 revenues dip 27% to $34.7m compared to $47.6m in 2001. But R&D rose from $10.8m in 2001 up to $13.8m in 2002.

Cymer in Korea and China

Cymer's new Shanghai office, officially opened in March, in close proximity to leading chipmakers and foundries, is located at King Tower, Pudong.

In the same month it opened a 25,000ft^2 facility to serve as its first international chamber refurbishment hub for the company's full line of advanced deep-ultraviolet light sources.

Pascal Didier, Cymer's president and CEO noted, "As the industry enters into the 'Golden Age' of DUV lithography, it's imperative that Cymer is readily able to support worldwide demand for DUV light sources.

"With more than half of our substantial global installed base located in Asia, this dedicated chamber refurbishment facility in south Korea further ensures we are equipped with the necessary world-class infrastructure that our customers have come to expect."